

CC COMPACT SIMPLE FIX



EASYLINE SIMPLE FIX C-R30 100 V

186916, 186917, 186918, 186919, 186920, 186921

Typical Applications

Built-in or independent version for

- Shop lighting
- Downlights
- Residential lighting

EasyLine Simple Fix C-R30 100 V

■ **WITH INTEGRATED CORD GRIP
FOR INDEPENDENT OPERATION**

■ **SELV**

■ **LONG SERVICE LIFE:
UP TO 50,000 HRS.**

■ **PRODUCT GUARANTEE: 5 YEARS**



EasyLine Simple Fix C-R30 100 V

Product features

- Compact casing shape
- Fixed output current

Electrical features

- Mains voltage: 100–240 V $\pm 10\%$
- Mains frequency: 50–60 Hz
- Push-in terminals: 0.5–1.5 mm²
- Power factor at full load: see table "Electrical characteristics" on page 4
- Open circuit voltage ($U_{max.}$): 60 V
- Secondary side switching of LED modules is not allowed.

Safety features

- Protection against transient main peaks up to 0.5 kV (between L and N) and up to 1 kV (between L and N for 186920, 186921)
- Electronic short-circuit protection
- Overload protection
- Protection against "no load" operation
- Degree of protection: IP20
- Protection class II
- SELV

Packaging units

Ref. No.	Packaging unit		
	Pieces per box	Boxes per pallet	Weight g
186916	20	180	82
186917	20	180	70
186918	20	150	70
186919	20	150	70
186920	20	100	149
186921	20	100	161



Dimensions

Ref. No.	Casing leads	Length	Width	Height	
		a (mm)	b (mm)	c (mm)	
EasyLine SimpleFix C-R30 100 V					
186916	K52	—	123	45	19
186917	K52	—	123	45	19
186918	K51.2	—	115	45	29
186919	K51.2	—	115	45	29
186920	K27	—	105	68	32
186921	K27	—	105	68	32

Applied standards

- EN 61347-1
- EN 61347-2-13
- EN 61547
- EN 61000-3-2
- EN 62384
- EN 55015



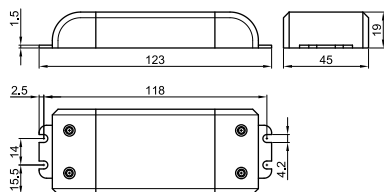
Product guarantee

- 5 years for operation at recommended operation temperature (see table for expected service life time on page 4)
- The conditions for the Product Guarantee of the Vossloh-Schwabe Group shall apply as published on our homepage (www.vossloh-schwabe.com). We will be happy to send you these conditions upon request.

The values contained in this data sheet can change due to technical innovations. Any such changes will be made without separate notification.

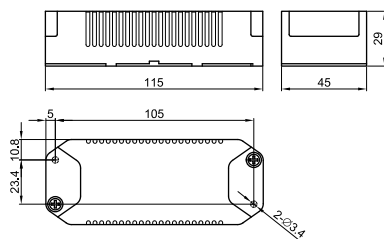
Product drawings and photos

K52



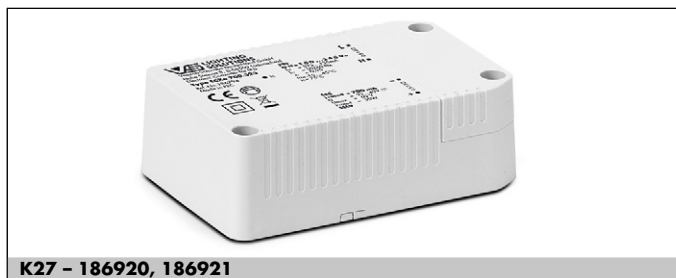
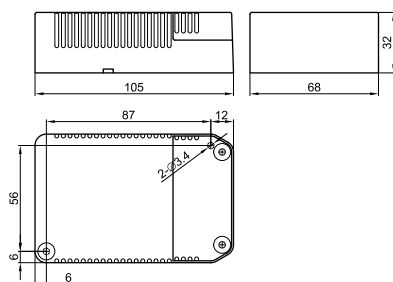
K52 – 186916, 186917

K51.2



K51.2 – 186918, 186919

K27



K27 – 186920, 186921

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Max. output W	Type	Ref. No.	Voltage 50–60 Hz V	Mains current mA	Inrush current A / μ s	Current output DC mA (\pm 7.5 %)	Voltage output DC (V)	THD at full load % (230 V)	Efficiency at full load % (230 V) % (100 V)		Ripple 100 Hz %
9	ECXe 700.315	186916	100–240	105–45	2.05	700	5–13	15	> 78	> 76	\leq 30
16	ECXe 350.318	186917	100–240	209–81	5.00	350	23–46	18	> 82	> 80	\leq 30
21	ECXe 500.319	186918	100–240	259–99	18.00	500	21–42	14	> 82	> 80	\leq 30
21	ECXe 700.321	186919	100–240	252–98	17.55	700	10–29	17	> 81	> 79	\leq 30
30	ECXe 700.323	186920	100–240	372–135	21.00	700	21–43	19	> 84	> 82	\leq 30
44	ECXe 1050.324	186921	100–240	372–135	23.00	1050	21–42	17	> 87	> 85	\leq 30

Ref. No.	Ambient temperature		Operation humidity		Storage temperature		Storage humidity		Max. operation temperature at t _c point °C	Degree of protection
	range °C min.	°C max.	range % min.	% max.	range °C min.	°C max.	range % min.	% max.		
All types	-15	+45	20	60	-40	+80	5	95	+85	IP20




Operation	Ref. No.	
current	All	
All	75 °C*	85 °C
hrs.	50,000	30,000

VS LIGHTING SOLUTIONS
 Vossloh-Schwabe Deutschland GmbH
 Hohe Steinstr. 6, D-58509 Lüdenscheid
 Electronic Converter for LED

Type ECx70.300.315
 Ref. No. 186916
 Made in PKC

PRI
U_N = 100 ... 240 V ~
I_N = 1,43 A
f_N = 50/60 Hz
 $\lambda = 0,94 \text{ C}$

Sec
 I_{sc} = 1,5 ... 45 °C
 I_{sc} = 75 °C
U_{sc} = 700 mA
U_{sc} = 5 ... 13 V ~
 I_{sc} = 9 W
SELV

VS LIGHTING SOLUTIONS
 Vassallo-Schwabe Deutschland GmbH
 Höhe Steiner 8, D-58509 Ulschensiek
 Electronic Converter for LED





Type ECXe 350-318
 Ref. No. 186917
 Made in PRC

PR I
U_N = 100 ... 240 V -
I_N = 209 ... 31 mA
f = 50/60 Hz
λ = 0,9°C

low +15 ... +45°C
 to -85°C

SEC
I_{rated} = 350 mA
U = 23 ... 46V
U_{max} = 60 V
Protect
SELV

0,4 ... 1,6 A








VS LIGHTING SOLUTIONS
 Vossloh-Schwabe Deutschland GmbH
 Horne Steinert B, D-58509 Lüdenscheid
 Electronic Converter for LED


■ 70-250V	SEC	Rated = 500 mA	+
	U	= 21...42V ...	+
	Umax	= 60V	+
■ 100-500V	Prated	= 21W	+
	SELV		+

Type EcKe 500.319
 Ref.-No. 186918
 Made in PKC

■ **UN = 100 ... 240 V~**
fN = 25 ... 99mA
fN = 50/60 Hz
 λ = 0,9 C
 Temp. 0 ... 55°C
 IC: 75°C

CE  

[illegible]



LIGHTING SOLUTIONS

Vossloh-Schwabe Deutschland GmbH



Hohe Steinert 8, D-58509 Lüdenscheid

Electronic Converter for LED



Type ECXe 700.323



Ref.-No. 186920

Made in PRC








PR I
U N = 1 0 0 ... 2 4 0 V -
I_N = 372 ... 1,135 mA
f_N = 50/60 Hz
λ_e = 0,95
ta = -15 ... +45 °C
tc = 75 °C

SEC
I rated = 700 mA
U = 21 ... 43V ∞
Umax = 60 V
Protet = 30W
SELV








VS LIGHTING SOLUTIONS

Vossloh-Schwabe Deutschland GmbH
Hohe Steiner 8, D-58509 Lüdenscheid
Electronic Converter for LED

Type ECXe 1050.324

Ref.-No. 186921
Made in PRC

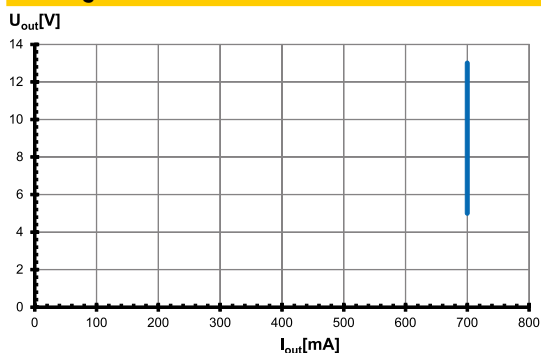
 

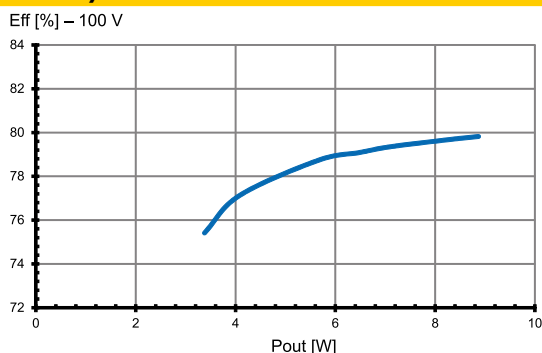


Typ. performance graphs for 186916 / Type ECXe 700.315

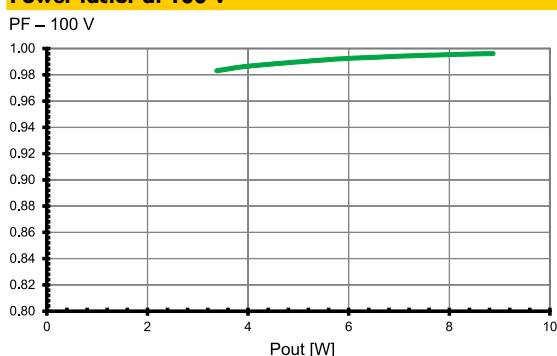
Working area



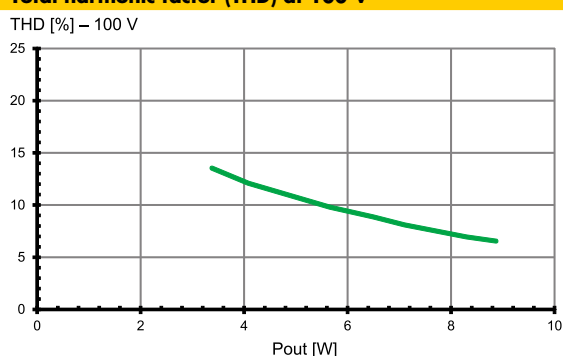
Efficiency at 100 V



Power factor at 100 V

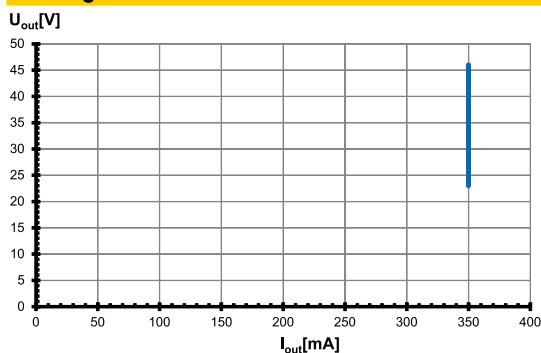


Total harmonic factor (THD) at 100 V

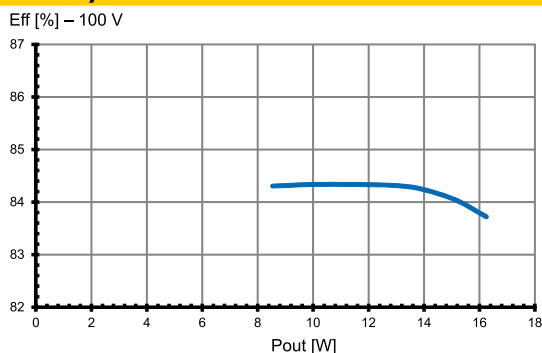


Typ. performance graphs for 186917 / Type ECXe 350.318

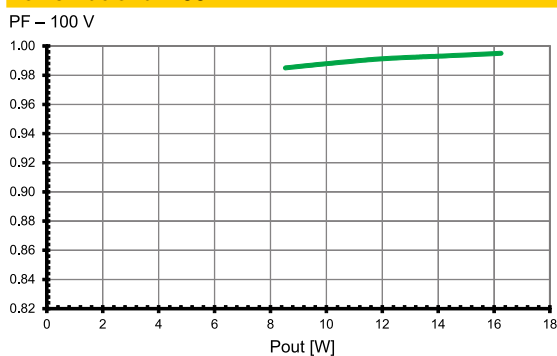
Working area



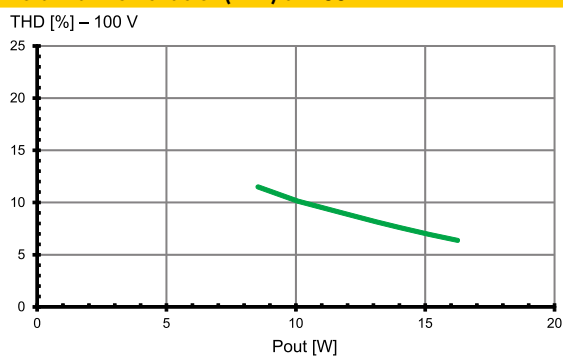
Efficiency at 100 V



Power factor at 100 V



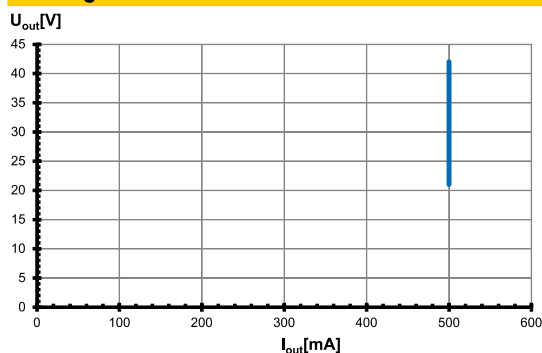
Total harmonic factor (THD) at 100 V



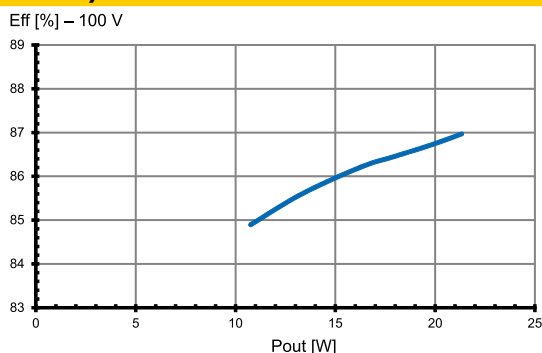
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Typ. performance graphs for 186918 / Type ECXe 500.319

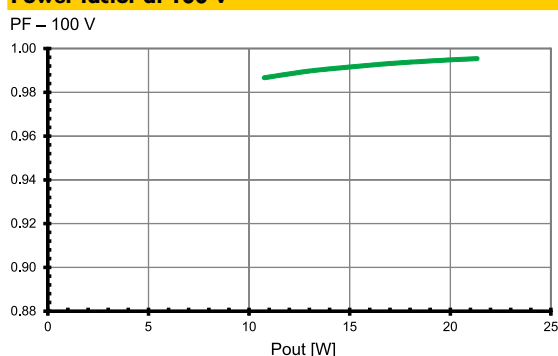
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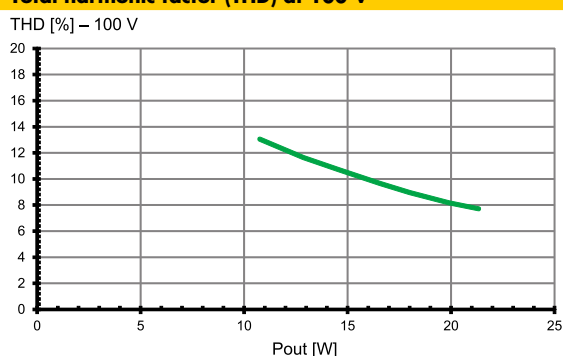
Efficiency at 100 V



Power factor at 100 V

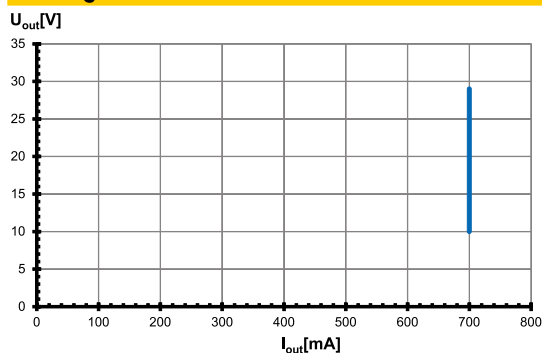


Total harmonic factor (THD) at 100 V

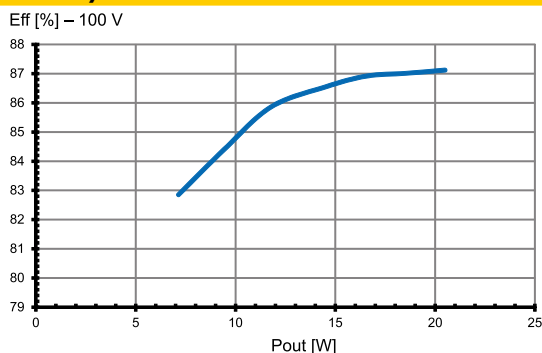


Typ. performance graphs for 186919 / Type ECXe 700.321

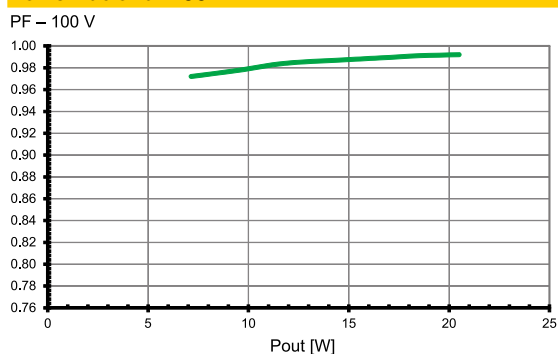
Working area



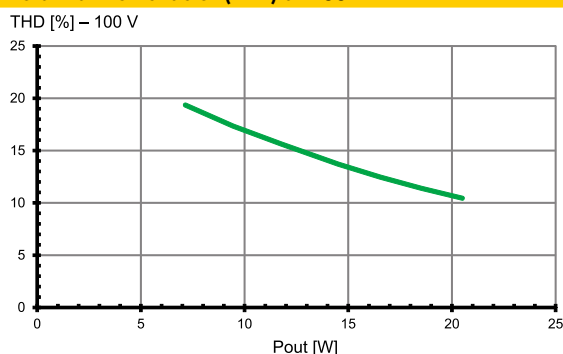
Efficiency at 100 V



Power factor at 100 V



Total harmonic factor (THD) at 100 V

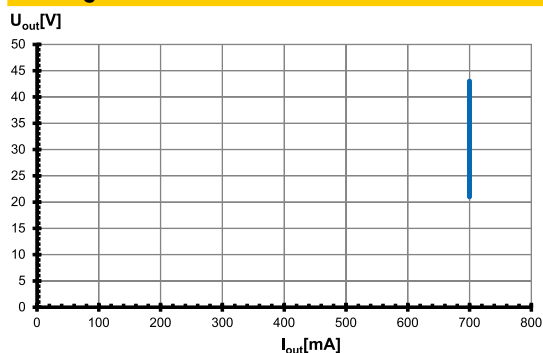


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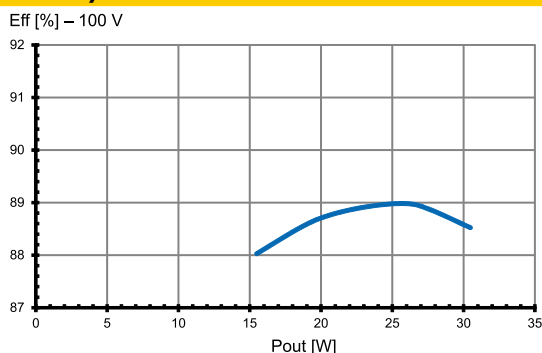
LED Drivers – EasyLine Simple Fix C-R30 100 V

Typ. performance graphs for 186920 / Type ECXe 700.323

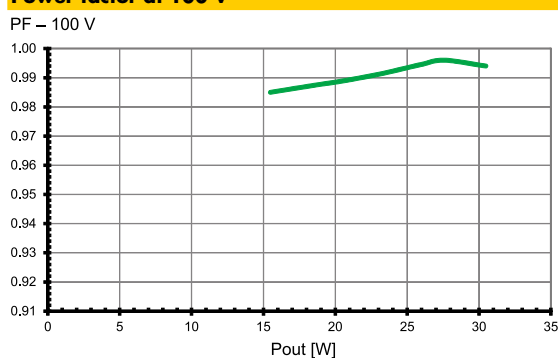
Working area



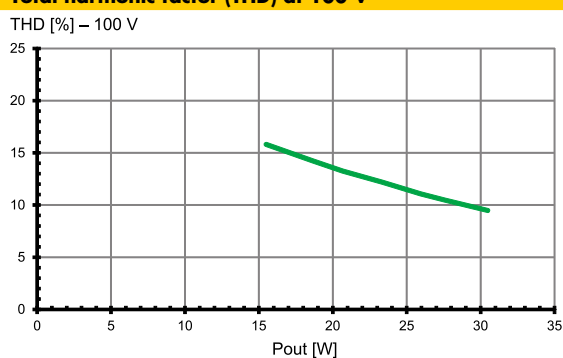
Efficiency at 100 V



Power factor at 100 V

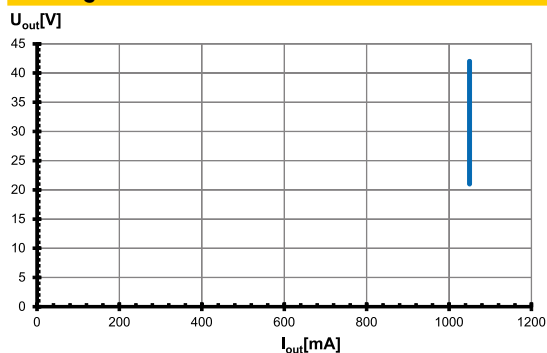


Total harmonic factor (THD) at 100 V

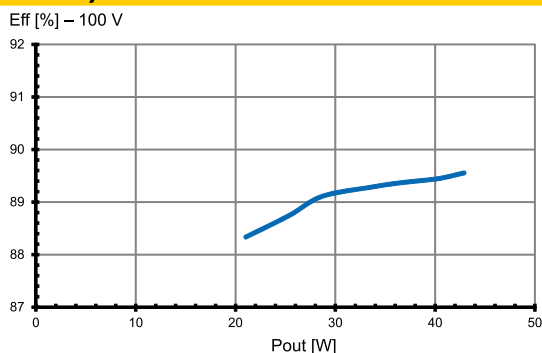


Typ. performance graphs for 186921 / Type ECXe 1050.324

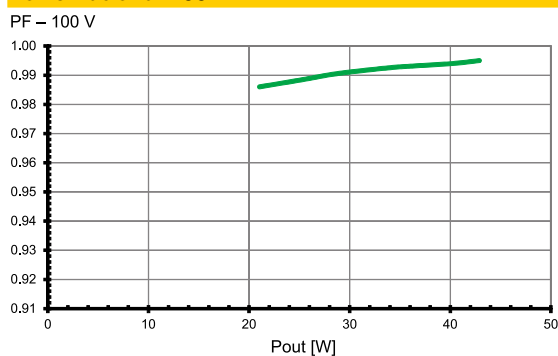
Working area



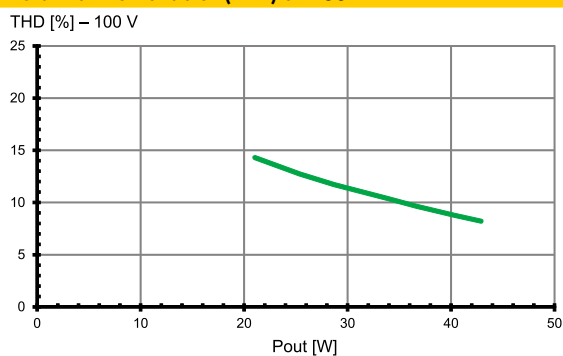
Efficiency at 100 V



Power factor at 100 V



Total harmonic factor (THD) at 100 V



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Safety functions

- Transient mains peaks protection:
Values are in compliance with EN 61547
(interference immunity).
Surges between L-N:
186916, 186917, 186918, 186919,
up to 0.5 kV
186920, 186921 up to 1 kV
- Short-circuit protection: The control gear is protected against
short-term short-circuit
- Overload protection: The control gear only works in range of rated
output power and voltage problemfree
($< 60 \text{ V DC}$).
Please check before switch-on mains power
supply that the selected LED load is suitable
(see Electrical Characteristics on data sheet).
- No load operation: The control gear is protected against no load
operation (open load).
- If any of the above mentioned safety functions will be triggered,
disconnect the control gear from the power supply then find and
eliminate the cause of the problem.

Assembly and Safety Information

Installation must be carried out under observation of the relevant regulations and standards. Installation must be carried out in a voltage-free state (i.e. disconnection from the mains). The following advices must be observed; non-observance can result in the destruction of the LED drivers, fire and/or other hazards.

Mandatory regulations

- DIN VDE 0100
- EN 60598-1

Mechanical mounting

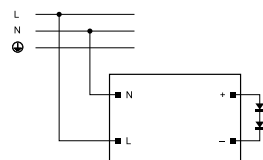
- Mounting position: Independent application: Drivers are allowed to use for independent applications
- Mounting location: Independent LED drivers do not need to be integrated into a casing.
Installation in outdoor luminaires: degree of protection for luminaire with water protection rate ≥ 4 (e.g. IP54 required).
- Degree of protection: IP20
- Clearance: Min. 0.10 m from walls, ceilings and insulation
- Surface: Solid and plane surface for optimum heat dissipation required.
- Heat transfer: If the driver is destined for installation in a luminaire, sufficient heat transfer must be ensured between the driver and the luminaire casing.
LED drivers should be mounted with the greatest possible clearance to heat sources. During operation, the temperature measure at the driver's t_c point must not exceed the specified maximum value.
- Fastening: Using M3 screws in the designated holes
- Tightening torque: 0.2 Nm

Electrical installation

- Connection terminals: Push-in terminals for rigid or flexible conductors with a section of 0.5–2.5 mm²
- Stripped length: 8.5–10 mm
- Wiring: The mains conductor within the luminaire must be kept short (to reduce the induction of interference).
Mains and lamp conductors must be kept separate and if possible should not be laid in parallel to one another.
Max. secondary side lead length: 1 m
- Polarity: Please ensure the correct polarity of the leads prior to commissioning. Reversed polarity can destroy the modules.
- Through-wiring: Is not allowed.
- Secondary load: The sum of forward voltages of LED loads is within the tolerances which are mentioned in the Electrical Characteristics on the data sheet.

- Parallel wiring: Parallel connection of LED loads is not allowed.

- Wiring diagram:



Selection of automatic cut-outs for VS LED drivers

- Dimensioning automatic cut-outs
High transient currents occur when an LED driver is switched on because the capacitors have to load. Ignition of LED modules occurs almost simultaneously. This also causes a simultaneous high demand for power. These high currents when the system is switched on put a strain on the automatic conductor cut-outs, which must be selected and dimensioned to suit.
- Release reaction
The release reaction of the automatic conductor cut-outs comply with VDE 0641, part 11, for B, C characteristics. The values shown in the following tables are for guidance purposes only and are subject to system-dependent change.
- No. of LED drivers
The maximum number of VS LED drivers applies to cases where the devices are switched on simultaneously. Specifications apply to single-pole fuses. The number of permissible drivers must be reduced by 20% for multi-pole fuses. The considered circuit impedance equals 400 mΩ (approx. 20 m [2.5 mm²] of conductor from the power supply to the distributor and a further 15 m to the luminaire).

Type	Ref. No.	Automatic cut-out type and possible no. of VS drivers pcs.			
Automatic cut-out type		B10	B13	B16	B20
ECXe 700.315	186916	78	101	125	156
ECXe 350.318	186917	46	60	74	93
ECXe 500.319	186918	48	62	76	96
ECXe 700.321	186919	37	48	59	74
ECXe 700.323	186920	27	35	44	55
ECXe 1050.324	186921	17	23	28	35
Automatic cut-out type		C10	C13	C16	C20
ECXe 700.315	186916	78	101	125	156
ECXe 350.318	186917	46	60	74	93
ECXe 500.319	186918	71	92	114	142
ECXe 700.321	186919	37	48	59	74
ECXe 700.323	186920	27	35	44	55
ECXe 1050.324	186921	17	23	28	35

- To limit capacitive inrush currents the current carrying capacity of each circuit breaker (fuse) can be increased by a factor of 2.5 with the help of our ESB (Ref. No.: 149820, 149821, 149822) inrush current limiters.

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